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(54) **SYSTEMS AND METHODS FOR DATA SYNCHRONIZATION AND FAILOVER MANAGEMENT**

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(57) **ABSTRACT**

A Data Synchronization and Failover Management (DSFM) system monitors simultaneous execution of non-identical instances of a software application and may label as a particular result of the software application the earliest output corresponding to that result produced by one of the instances. The DSFM may label one of the instances as a primary instance and the other instances as secondary instances and, if the primary instance fails, may re-label one of the secondary instances that computed all of the operations associated with the last result produced prior to the failure of the primary instance, as a new primary instance.

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